Changing the Way the Marine Corps Teaches Intelligence Preparation of the Battlefield

EWS Contemporary Issues Paper

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To

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19 February, 2008

Report Documentation Page

Form Approved
OMB No. 0704-0188

1. REPORT DATE	2. REPORT TYPE	3. DATES COVERED
19 FEB 2008		**00-00-2008 to 00-00-2008**

4. TITLE AND SUBTITLE	5a. CONTRACT NUMBER
Changing the Way the Marine Corps Teaches Intelligence Preparation of the Battlefield	5b. GRANT NUMBER
	5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S)	5d. PROJECT NUMBER
	5e. TASK NUMBER
	5f. WORK UNIT NUMBER
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **United States Marine Corps Command and Staff College,Marine Corps University,2076 South Street, Marine Corps Combat Development Command,Quantico,VA,22134-5068**	8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)	10. SPONSOR/MONITOR'S ACRONYM(S)
	11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release; distribution unlimited

13. SUPPLEMENTARY NOTES

14. ABSTRACT

15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT **unclassified**	b. ABSTRACT **unclassified**	c. THIS PAGE **unclassified**	**Same as Report (SAR)**	**15**	

The enemy, the size of the country and the foulness of the weather were all underestimated, and we are suffering for that now.

General Heinz Guderian

German planners were more responsible for the death of the Wehrmacht than their Soviet enemy during Operation Barbarossa. Hundreds of thousands were killed by harsh winter conditions after the possibility of a longer than anticipated engagement was ignored. Marine Corps planners are not any more prepared to think critically during Intelligence Preparation of the Battlefield (IPB) than the Germans were in 1941.

Critical thinking is a fundamental component of IPB. If IPB is flawed, then the decisions made during planning are similarly flawed; from faulty thinking, faulty plans emerge. The Marine Corps should change its approach to IPB instruction because current IPB curriculum does not encourage critical thinking, it emphasizes process over analysis, and is based on "flawed concepts of learning."[1]

IPB: Definition and Importance

IPB is a systematic, continuous process of analyzing the threat and environment in a specific geographic region.[2] It is a standardized approach staff officers use to analyze the enemy, weather, and terrain at all levels of the Marine air ground task force. More importantly, IPB is a significant part of the Marine Corps Planning Process

[1] Drew, Christopher T. *Critical Thinking and the Development of Innovative Problem Solvers.* Research Paper (Newport, RI), 2005, 28.

[2] U.S. Army, FM 34-130, 08 July 1994, 2-44.

(MCPP) and forms the basis for military decisions. According to MCWP 5-1, *Marine Corps Planning Process*, "The IPB process helps the commander selectively apply and maximize his combat power at critical points in time and space on the battlefield."[3] When done poorly, IPB can have disastrous results like Operation Barbarossa.

Does Not Encourage Critical Thinking

The Marine Corps' current method of teaching IPB is inadequate. The method in which current Marine Corps curricula are developed do not encourage higher order thinking skills (analysis, synthesis, and evaluation) needed in critical thinking but rather focus on lower order cognitive skills as a basis for instruction and testing.

IPB Programs of Instruction (POI) are based on Individual Training Standards (ITS). These ITS establish the training requirements for all Marines in the same occupational field (OccFld), Military Occupational Specialty (MOS), or billet[4]. Course developers translate desired learning outcomes to specific training standards.

While the ITS method is compatible with developing some curricula, it has several limitations when developing curricula and performance evaluation at higher levels of

[3] U.S. Marine Corps, MCWP 5-1, 05 January 2000, 58.
[4] MCO 1510.87B, September 12, 1997.

learning. ITSs do not require students to use higher order thinking skills required in critical thinking but instead rely heavily on rote memorization of a subject.[5] Reliance on ITS can result in a curriculum that neither teaches nor exercises critical thinking because critical thinking skills may not easily correlate into the required learning objectives format.

Evaluating critical thinking based on the ITS model is problematic as well. ITS form the basis for evaluating performance outlined in the standard to be achieved.[6] The Marine Corps' Training and Education Command uses the Systems Approach to Training Manual (SAT) as the "primary source of information for instructional program management and development…"[7] for curriculum development.

The SAT manual outlines eight different types of knowledge test items. Only one of these eight moves beyond the lower order cognitive realm (recall and simple comprehension) and into the higher cognitive realm.[8] There are many other difficulties when it comes to evaluating critical thinking skills. Military evaluators are often

[5] Drew, Christopher T. *Critical Thinking and the Development of Innovative Problem Solvers.* Research Paper (Newport, RI), 2005, 28.
[6] MCO 1553.2A, November 03, 2003.
[7] U.S. Marine Corps, *Systems Approach to Training (SAT) Manual*, June 2004.
[8]U.S. Marine Corps, *Systems Approach to Training (SAT) Manual*, June 2004.

required to make subjective assessments on whether the student has communicated the correct response.[9] The ability to communicate the correct response becomes more important than the response itself. Writing skills and bluffing may inflate scores, while factors such as poor handwriting, spelling, and grammatical errors could lower scores.[10]

Scoring represents another difficulty because it is time consuming, subjective, and unreliable. Answers to questions that require critical thinking can require as much effort to grade as they do the student to answer. Evaluators can easily become overwhelmed as the number of responses increases to grade increases. The Marine Corps should change it approach to IPB instruction because current curriculum does not encourage critical thinking.

Emphasize Process over Analysis

IPB Programs of Instruction (POI) deemphasize analysis by not including analysis instruction along with IPB subject-matter instruction. Currently students learn IPB as a series of four sequential steps with rough guidelines on how to accomplish each step. Practical exercises are used to ensure that students know how to apply the four steps. Although instructors informally provide students

[9]SAT Manual.
[10]SAT Manual.

with feedback on how to conduct analysis through practical exercises, this method is not as good as dedicated analytical training. What is noticeably missing is any training specifically dedicated to the conduct of analysis. The Marine Corps should change its approach to IPB instruction because current IPB curriculum is based on flawed educational concept of linking and transference.

"Flawed Concepts of Learning"

The current system of teaching IPB is based on the flawed educational concepts of linking and transference. The first flaw is based on the concept of linking. Linking is a faulty assumption that by teaching a process by parts that a student can independently link and execute the parts as a whole.[11] IPB curriculums embrace this concept because it makes it makes IPB easier to teach and easier for students to comprehend. Courses of instruction are centered on teaching the four individual steps of IPB before having students perform IPB either in whole or in part; however, research shows that linking rarely occurs.[12] When the primary method of teaching IPB requires students

[11] Drew, Christopher T. *Critical Thinking and the Development of Innovative Problem Solvers.* Research Paper (Newport, RI), 2005, 28.
[12] van Merrienboer, Jeroen J. G., "Blueprints for Complex Learning: The 4C/ID-Model," 2002, <http://www.ou.nl/info-alg-englishr_d/OTEC_research/publications/Jeroen%20van%20Merrienboer/Jeroen%20vanMerrienboer%20etrd.pdf> [5 December 2004], 2.

to learn IPB as parts then reassemble the steps into a comprehensive whole linking occurs.

The second flawed concept is transference or the ability to transfer critical thinking from one problem to another within a different domain. An example of transference using IPB is to assume a student's ability to analyze the enemy's ground order of battle transfers to his ability to analyze the enemy's air order of battle. Although both domains fall under the same step of IPB, they are distinct and require different types of thinking to analyze. This example is further complicated when considering weather and terrain. The problem arises when transference is assumed rather than built into the curricula.[13]

The third flaw is that IPB curricula rely too heavily on declarative knowledge. Declarative knowledge is usually given through the lecture method and requires students to memorize basic facts and sequence of the IPB process. This form of IPB instruction focuses on the lowest level of cognitive development-knowledge and comprehension instead of analysis, synthesis, and evaluation.[14] The Marine Corps should change its approach to IPB instruction because

[13] van Gelder, Tim "Teaching Critical Thinking, Some Lessons from Cognitive Science," 3.
[14] Van Gelder.

current IPB curriculum is based on the flawed educational concepts of linking and transference.

Counterargument

Over forty years ago, Brigadier General Eugene Kelley directed the formalization of a systematic process to understand the enemy, weather, and terrain "in order to elucidate the enemy's probable course of action."[15] Many have written articles that suggest that the IPB process is inherently deficient because of its narrowly focused process and that if it is to continue to be of utility then it must be adapted to accommodate a variety of different operating environments.[16] The bulk of these articles further suggest a wholesale modification to the process. A closer reading of the doctrine reveals that the IPB process already accounts for changes in the operating environment and differing mission. FM 34-130 states, "Commanders should apply the doctrine and information presented in this manual in any manner appropriate to their particular situation and mission."[17] Practitioners who view IPB as rigid and uncompromising are not using IPB to its fullest potential.

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[15] U.S. Army Intelligence Center & Fort Huachuca, James Finely, ed., *U.S. Army Intelligence History: A Sourcebook* (Fort Huachuca, AZ: 1995), 411.
[16] Brown, Lawrence T. *The Enemy We Were Fighting Was Not What We Had Predicted."* Monograph.
[17] U.S. Army, FM 34-130, 08 July 1994, 2-44.

Some curriculum developers object to developing a critical thinking program of instructions. They argue that developing a POI is both time consuming and requires resources at a time when schoolhouses are understaffed and improperly resourced. Although these are valid points for consideration, the need to have critically thinking personnel more than outweighs staffing and resource shortfalls. IPB leads to decisions, and critical thinking enables that process.

Recommendations

Current operating environments place a higher demand on staff officers to solve problems of ever-increasing complexity. Most of these problems cannot be solved by using lower order cognitive skills but require staff officers to think critically and make judgments with incomplete or disparate information. While the Marine Corps' training objectives place a premium on IPB training, an equal emphasis should be placed on developing critical thinking skills through dedicated analysis training. Although practical exercises accompanying IPB curricula offer a good venue for instructors to provide guidance on how to conduct analysis a better venue would be more formal instruction on analysis complete with training objectives.

In addition to formal course work on analysis, the Marine Corps must incorporate critical thinking into its training programs. The benefits of critical thinking are not limited to IPB but can improve the overall decision making process as well. What is crucial because the Marine Corps views intelligence as "inseparable from operations."[18]

Marines need to be exposed to diverse teaching methods that promote critical thinking. Questioning, classroom discussion, and written assignments should be used to encourage critical thinking. Teaching IPB through declarative knowledge reinforces that there is only one correct answer for each problem. Students need to be exposed to problems sets that introduce ambiguity to reinforce the understanding that multiple, diverse answers are acceptable for a problem.

Conclusion

Current IPB curriculums do not encourage the critical thinking that is required in todays operating environment. Changes in instruction should place more emphasis on analysis rather than merely teaching the individual steps of the process itself. Further, curriculum developers should use a more widespread approach when designing a

[18] U.S. Marine Corps, MCDP 2, June 7, 1997.

curriculums to ensure that students understand the interrelation of IPB steps and avoid linking and transference difficulties.

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